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09/355,729 05/10/00 HOLMSTROM

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EXAMINER

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ART UNIT

PAPER NUMBER

2834

DATE MAILED:

01/12/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

| | | |
|------------------------------|--------------------------------------|---|
| Office Action Summary | Application No. 09/355,729 | Applicant(s) Holmstrom et al. |
| | Examiner Enad, Elvin | Group Art Unit 2834 |

Responsive to communication(s) filed on _____.

This action is **FINAL**.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

Claim(s) 1-20 and 22-24 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

Claim(s) _____ is/are allowed.

Claim(s) 1-6, 10-20, and 22-24 is/are rejected.

Claim(s) 7-9 is/are objected to.

Claims _____ are subject to restriction or election requirement.

Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on _____ is/are objected to by the Examiner.

The proposed drawing correction, filed on _____ is approved disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All Some* None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) _____.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent application No. PCT/SE98/00170, filed on February 02, 1998 .

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
3. The disclosure is objected to because of the following informalities: Specification pages 1,4, and 9 refer to the claims for completeness. The specification should not refer to the claims for supporting information. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. Claims 1,14,16,17 and 24 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 2, it appears "dawn" should have been ---drawn---. Moreover, the use of the term "relatively" pertaining to the cuff means which extends axially a "relatively short distance into the slot" is indefinite. One would not be able to ascertain the value of a "relatively short distance into the slot".

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Regarding claim 14, use of the term “such” to describe the relationship between the elasticity and coefficients of thermal expansion of the materials is vague and indefinite. One would not be able to ascertain the relative values of elasticity and coefficients of thermal expansion in order to obtain the desired result.

Regarding claim 16, use of the term “substantially” to describe the magnitude of the coefficients of thermal expansion is indefinite since one would not be able to ascertain the relative values. Moreover, the specification does not provide as to what range of value(s) of the coefficients of thermal expansion such that they are substantially of the same magnitude.

Regarding claim 17, the limitation pertaining to the “...strength of the weakest of the materials.” is confusing lacking proper antecedent basis. In claim 23, the limitation pertaining to the semiconducting layers is lacking proper antecedent basis

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claim 24 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is not a support in the specification for an “electric field confining insulating covering” surrounding the core.

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Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1,2,3,5,6,10,19,20 and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shildneck (USP 3,014,139) in view of Aimar (USP 4,161,669).

Shildneck discloses the machine essentially as claimed except for providing cuff means at one end surface of the stator.

Aimar teaches that it is known to provide an insulating assembly for the stator slots comprised of a pair of end plates of insulating material such as plastic. As seen in figures 1-5, end plate 10 is comprised of a plurality of cutouts 12 (cuff means) having the same contour and number as the stator slots.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have provided the end plates having cuff means as disclosed by Aimar to the stator of Shildneck, since such a modification according to Aimar in column 1, lines 20-51 would provide support for the stator end turn windings as well as forming an insulating portion between the inner wall of the slots and the stator winding.

9. Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Shildneck (USP 3,014,139) in view of Aimar (USP 4,161,669) and further in view of Siemens (UK 468,827).

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Shildneck and Aimar disclose the machine essentially as claimed except for the stator slots having an alternating profile of wide and narrow parts.

Siemens teaches that it is well known to form the slot of a machine stator such that it has a profile of wide and narrow parts. As can be seen from the figure, the sides of the slot provide built in support in the radial direct for the windings of the machine. This eliminates the need for additional elements to provide radial separation of the coils

It would have been obvious to one of ordinary skill in the art at the time of the invention to have formed the slot of Shildneck such that it had a profile of alternating wide and narrow elements, like that shown by Siemens, so that the stator core itself provides radial separation of the windings without the need for additional elements.

10. Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Shildneck (USP 3,014,139) in view of Aimar (USP 4,161,669) and Elton ('565).

Shildneck and Aimar disclose the claimed invention except for having the stator winding comprised of semiconducting layers.

Elton ('565) discloses a cable with stranded conductors surrounded by a first inner semiconducting insulation layer (104), an intermediate solid insulation layer (106) and an outer semiconducting insulation layer (110) which is connected to ground. Such an arrangement, as disclosed by Elton helps to prevent corona discharge between the cable and the surrounding elements.

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It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided in the machine of Shildneck a cable comprising an inner layer having semiconducting properties, an insulating layer surrounding the inner layer and an outer layer having semiconducting properties, as disclosed by Elton, in order to prevent corona discharge from the winding.

11. Claim 12 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Shildneck (USP 3,014,139) in view of Aimar (USP 4,161,669) and Elton ('565) and further in view of Takaoka.

Shildneck, Aimar and Elton ('565) disclose the claimed invention except for utilizing a particular cable diameter and conducting area.

Takaoka et al. in column 1, lines 22-29 teach that the selection of the particular diameter of the conductor size is contingent upon the amount of power that is transmitted.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have use a conductor as disclosed by Shildneck and Elton having a diameter similar to that as claimed by applicant, since according to Takaoka, the selection of the particular cable diameter is contingent upon the amount of power desired to be transmitted. Moreover, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233

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12. Claims 13,14,16,17,18 and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shildneck (USP 3,014,139) in view of Aimar (USP 4,161,669) and Elton ('565) and further in view of Elton ('116).

Shildneck, Aimar and Elton ('565) disclose the claimed invention except for the semiconducting layers having the same coefficients of thermal expansion.

Elton ('116) teaches that it is well known to form different overlapping insulations with the same coefficient of thermal expansion in order to prevent thermal stress to separate and crack the materials to cause failure of the insulation (see lines 38-44, col.7).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have formed the semiconducting layers and insulation of Shildneck and Elton ('565) such that the different layers of insulation had similar or the same coefficient of thermal expansion, as disclosed by Elton ('116), in order to prevent failure caused by thermal aging and cycling.

13. Claims 15 and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shildneck (USP 3,014,139) in view of Aimar (USP 4,161,669) and Elton ('565) and Haxton.

Shildneck, Aimar and Elton ('565) disclose the claimed invention except for the material of the cable layers having a modulus of elasticity less than 500 Mpa.

Haxton teaches that it is known to form the inner sheath 6 and outer sheath 11 of a high voltage cable having modulus of elasticity from 90 Mpa to 600 Mpa.

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected a cable with modulus of elasticity similar to that as taught by Haxton since according to Haxton such a modification would provide a cable that is highly flexible having lower minimum bend radius.

Allowable Subject Matter

14. Claims 7-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elvin Enad whose telephone number is (703) 308-7619.

17. Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 308-0956. The fax phone number for this Group is (703) 305-3431 (32).



Elvin Enad
Primary Examiner
Art Unit 2834
01.08.2001